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DAVID J. HOLDSWORTH

January 31, 1985

Mr. Ron Daniels
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
355 West North Temple
Salt Lake City, Utah 84180-1203

Dear Ron:

Enclosed for your consideration for approval is a copy of the Mining Plan for Ziegler Chemical and Mineral Corporation, State Gilsonite Lease No. ML-851A. Two copies have been submitted to State Lands and Forestry as per their rules and regulations.

In my telephone discussion with John Blake's assistant, it is my understanding we do not need to complete State Oil, Gas & Mining's revised forms to include in the Mine Plan for submission to State Lands and Forestry. However, as you and I talked yesterday, if you will send us the new forms we will complete and return them to you to become a part of the Mine Plan you review.

It was good to visit with you on the phone--keep us in mind when you're out this way again.

Very truly yours,

NIELSEN & SENIOR


Rolene Smith
Legal Assistant

RS:rl

Enclosure

RECEIVED

FEB 01 1985

DIVISION OF OIL
& GAS & MINING

MINING PLAN FOR
ZIEGLER CHEMICAL AND MINERAL CORPORATION
GILSONITE MINES
STATE GILSONITE LEASE NO. ML-851A
UINTAH COUNTY, UTAH

Prepared by:
Law Firm of Nielsen & Senior
363 East Main Street
Vernal, Utah 84078

EXHIBITS

Exhibit A:

Topographic Map, Independent I-5 Area

Exhibit B:

Vegetation

Exhibit C:

Engineering Profile of Claim Area

Exhibit D:

Area map showing travel routes and nearby communities

Exhibit E:

Site Map of Development

Ziegler Chemical and Mineral Corporation hereby notifies the Utah Division of State Lands of its gilsonite mining operations under mineral leases granted by the State of Utah. Said mining operations will disturb the surface of the land but are exempt from the Utah Mined Land Reclamation Act (Title 40-8, U.C.A. 1953) since less than two (2) acres of land are involved.

Pursuant to the Rules and Regulations of the Board of State Lands, Ziegler Chemical and Mineral Corporation submits the following information:

1. Lease Number: ML851A
Shaft Location:

Township 9 South, Range 24 East, Salt Lake Base & Meridian:

Section 16: Southwest quarter Southwest quarter Southwest quarter Northwest quarter Northeast quarter. Shaft will be approximately 1,319.45 feet South and 267.87 feet East of the North quarter section line of said Section 16. (See attached map marked "Exhibit C")

Lessee is: Ziegler Chemical and Mineral Corporation
P.O. Box 455
Great Neck, New York 11021

Utah Operations:
Star Route
Vernal, Utah 84078

Operator: Ziegler Chemical and Minerals Corporation. Norman Haslem of Naples, Utah is Mine Superintendent.

2. Location of Mine Shaft.

USGS topographic map showing the location of the proposed mine shaft is attached as "Exhibit A".

3. Description of Excavation.

The mine shaft opening was sunk along the length of the vein and is sixteen (16) feet in length. The width of the vein at the surface is approximately two (2) feet. The mine shaft opening in this area is two (2) feet by sixteen (16) feet and the shaft will eventually extend to the bottom of the vein of gilsonite. The depth of the gilsonite vein is approximately 800 feet. The shaft

direction from the site of the existing mine site. Consequently mining operations on this vein may be expected to continue for a number of decades. At this time, however, there are no plans to work more than one shaft at a time. It is estimated that it will take a minimum of sixty (60) years to mine out one mile of this gilsonite vein.

SUPPLEMENTAL INFORMATION

A. Annual Disturbance and Production.

The mining operation as a whole will involve the use of about one acre of land. The total surface area which will actually be disturbed at any time is less than one-third (1/3) of an acre.

It is anticipated that approximately 8,100 tons of gilsonite will be extracted from the mine in each 12 month period. Ore is being mined at a rate of approximately forty-five (45) tons per mining day. Actual mining is taking place approximately three and one-half (3½) to four (4) days per week. Other days are utilized in bracing, supporting and maintenance operations to secure the shaft and ensure the safety of the miners.

B. Site Map.

A site map is attached as "Exhibit E".

C. Mining Method.

The mining operation involves two miners and one hoistman working one shift per day. Mining operations are conducted through the two (2) foot by sixteen (16) foot shaft opening which is encased in a concrete collar. The shaft walls extend nearly straight down for approximately twenty (20) feet. At a depth of a minimum thirty (30) to thirty-five (35) feet, drifts are driven along the vein in such fashion that a slope is created allowing the gilsonite as it is chipped loose to slip down the slope to a bin where buckets or an air lift system conveys the gilsonite to the surface. Miners use chipping hammers to dislodge the gilsonite from the vein. This mining method is often referred to as the underhand rill method.

A conventional headframe was placed over the shaft opening and a hoist provides access to the mine.

The I-4 mine shaft is utilized as an escape route from the new shaft. (See "Exhibit C") At all times during mining operations both the mine shaft and the escape shaft are maintained in a safe and operable condition and a twenty (20)

is being excavated at a rate of about two hundred (200) to three hundred (300) vertical feet per year, but the shaft opening is being maintained at the two (2) foot by sixteen (16) foot original dimensions.

A head frame has been constructed over the shaft entrance and is on concrete pads, creating a minimal surface disturbance of about four hundred (400) square feet in total. The hoist house is located one hundred (100) feet from the shaft on a fifteen (15) foot by thirty (30) foot concrete slab.

The existing excavated I-4 Ziegler mine shaft, located 505 feet Northeast of the I-5 mine is used as an escape way. (See "Exhibit C")

No camp site was built adjacent to the mine shaft since the mining location is adjacent to Little Bonanza. Facilities for the miners are being provided at Little Bonanza.

An existing road runs to the mine site; consequently, no surface disturbance was occasioned by road construction.

A storage bin with a capacity to store twenty-five (25) to thirty (30) tons of gilsonite is located near the shaft and sits on concrete footings, creating a surface disturbance of about four hundred (400) square feet.

4. Source of Water or Fluids.

No fluids are being used in the actual mining operation.

5. Existing Land Uses.

The area surrounding the mine shaft consists of barren hills and dry washes, sparsely vegetated with desert shrub type vegetation. In general, ground cover is sparse, approximately 20 percent. The dominant vegetation is an association of salt-tolerant, low-growing shrubs including shadscale, horsebrush, four-wing saltbush, greasewood, black sage, rabbitbrush, big sage and Nuttall salt bush. Grasses found include Indian ricegrass, needle and thread, cheatgrass and galleta. (See map and table attached as Exhibit "B"). The area is generally too dry to support the growth of any significant quantities of grass or other feed type vegetation, consequently there is minimal animal life present in the area. Wildlife which are occasionally present in the area include rabbits, coyotes, antelope, birds and mule deer.

There are presently a number of old abandoned gilsonite shafts existing along the vein in the general vicinity of the new

mining operations. There is some oil and gas drilling activity and gilsonite mining activity in the general vicinity of the new mine shaft. Other than mining and oil and gas activity there are no other known uses of or activity on the land in the immediate vicinity of the existing operations.

6. Access to Mine Site.

Utah Highway 45 runs to within two miles of Little Bonanza headquarters. The I-5 mine site is one-third of a mile west of the headquarters on an existing dirt road; Utah Highway 45 is a paved highway which is maintained and kept opened year round. Miners are residing in nearby communities which are served by Highways 40 and 45.

7. Reclamation.

It is anticipated that the I-5 mine shaft will be used for approximately three (3) years. The mining operation does not require disposal of any significant overburden since the gilsonite vein comes to the surface in this area. Waste rock encountered during the mining operation is left underground.

Garbage and solid wastes other than overburden, waste rock and incidental dust and earth products are placed in covered fifty-five (55) gallon drums and emptied as necessary at the garbage dump now existing in Little Bonanza, Utah.

After operations in the area are complete, the mine shaft will be sealed with a cap of twelve (12) inch thick reinforced concrete. All buildings, machinery and debris will be removed from the site. Any areas where the surface has been disturbed will be regraded to rounded cross-sections. Where possible soil material will be placed over the building sites and storage areas prior to re-seeding. These areas will be covered with soil and seeded with plants and vegetation compatible with the surrounding plant life and the arid conditions.

All disturbed soil will be scarified and fertilized prior to reseedling. Reseeding of the area will be completed and based on recommendations of soil tests conducted by the Ute Indian Laboratory.

8. Timetable.

The mine shaft and attendant facilities have been constructed. It is estimated that it will take a minimum of three (3) years to mine out the shaft, and could take much longer if the vein widens toward the bottom. The vein is known to be several miles in length, extending generally in a northwesterly

foot area around each shaft is enclosed within a four (4) foot high concrete collar. Mining is conducted at all times in a safe and orderly manner with the safety of the miners and the public being given highest priority in all mining operations.

The ore is transported at a rate of approximately six (6) truck loads per mining day, seven (7) to eight (8) tons of gilsonite to the load, from the mine site to Little Bonanza for processing.

D. Water Rights.

No water is being used in the mining operation. Culinary water is available at Little Bonanza. No water rights were acquired or affected by this operation, nor any stream diversion or channel changes. There are no streams in the vicinity of this mine.

E. Transportation of Ore.

The gilsonite is transported from the mine site to Little Bonanza, Utah, at a rate of approximately six (6) truck loads per mining day, seven (7) to eight (8) tons of gilsonite per load for processing.

F. Employees.

Two miners and one hoistman are employed at the mine site on a fulltime basis. Miners reside in nearby communities commuting to the mine site daily.

MINING APPLICATION
NO. _____
Date _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

NOTICE OF INTENTION TO COMMENCE MINING OPERATIONS
(See Rule M of General Rules and Regulations)

1. Name of Applicant or Company Ziegler Chemical & Mineral Corporation
Corporation () Partnership () Individual ()
2. Address P.O. Box 455, Great Neck, / Star Route, Little Bonanza, Vernal,
Permanent N.Y. 11021 Temporary Utah 84078
3. Name and title of person representing company Norman Haslem, Gen. Supervisor
4. Address Star Rt., Little Bonanza, UT. Office Phone 789-3593
84078
5. Location of Operation Uintah Sec. 16 T. 9S R. 24E
County
6. Name of Mine Independant I-5 Mine
7. Mineral to be mined: Mining method:

() Coal	() Flagstone	<u>Underground mine utilizing</u> <u>underhand rill mining method</u> <u>through 16 ft. by 3 ft. shaft</u> <u>opening</u>
() Copper	() Gravel	
() Manganese	() Shale	
() Iron Ore	() Uranium	
() Phosphate	(X) Gilsonite	
() Potash	() Bituminous Sandstone	
() Fluorspar	() Tungsten	

() Other (specify) _____
8. Have you or any person, partnership or corporation associated with you received an approved Notice of Intention to Commence Mining Operations by the State of Utah for operations other than described herein?
(X) Yes () No
If yes, list all approval numbers now under surety:
Cottonwood #1 _____
Bonanza 8A _____

9. Owner/Owners of record of the surface area within the land to be affected:
State of Utah Address #3 Triad Center, Suite 350
Address Salt Lake City, Utah 84180-1203
Address _____
Address _____

10. Owner/Owners of record of minerals to be mined:

State of Utah	Address
	Address
	Address
	Address

11. Owner/Owners of record of all other minerals within any part of the land affected:

State of Utah	Address
	Address
	Address

11a. Have the above owners been notified in writing?

(X) Yes () No See attached Mine Plan

12. Source of Operator's legal right to enter and conduct operations on land to be covered by the Notice State Lease ML851A

13. Approximate acreage to be disturbed:

A) Mining Operation Area - 1.0 acres
(include operations, storage, & disposal area)

B) Access Road or Haulageway - 0 acres

C) Drainage System - 0 acres

TOTAL ACRES: 1.0

14. Give the names and post office addresses of every principal Executive, Officer, Partner, (or person performing a similar function) of Applicant:

Name:	Title:	Address:
Ziegler, Sr.	Chairman of Board	170 Great Neck Road Great Neck, N.Y. 11021
Ziegler, Jr.	President	170 Great Neck Road Great Neck, N.Y. 11021
D. Bartolomeo	Vice-President	170 Great Neck Road Great Neck, N.Y. 11021

15. Has Applicant, any subsidiary or affiliate or any person, partnership, association, trust, or corporation controlled by or under common control with Applicant, or any person required to be identified by Item 14, ever had an approval of a Notice of Intention withdrawn or has surety relating thereto ever been forfeited? () Yes (X) No

If yes, explain:

STATE OF UTAH

COUNTY OF UINTAH

I, Norman R. Haslem, having been duly sworn
depose and attest that all of the representations contained in the foregoing
application are true to the best of my knowledge; that I am authorized to
complete and file this application on behalf of the Applicant and this
application has been executed as required by law.

Signed: Norman R. Haslem

Taken, subscribed and sworn to before me the undersigned authority
in my said county, this 30th day of January, 19 85.

Notary Public: John Smith

My Commission Expires: Oct 22, 1988

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides as follows:

"Information relating to the location, size, or nature of the deposit and marked confidential by the operator, shall be protected as confidential information by the Board and the Division and not be a matter of public record in the absence of a written release from the operator, or until the mining operation has been terminated as provided in subsection (2) of section 40-8-21."

Is confidential information contained herein?

YES _____ (Initial)

NO _____ (Initial)

Sections desired to be maintained as confidential information -

_____	_____	_____
_____	_____	_____
_____	_____	_____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

MINING AND RECLAMATION PLAN

(Other forms may be used in lieu of MR 2, provided
they contain the same information)

1. Name of Applicant or Company Ziegler Chemical & Mineral Corporation
2. Proposed type of operation Underground gilsonite mine
3. (a) Prior Land Use(s) Gilsonite Mining
(b) Current Land Use(s) None
(c) Possible or Prospective Future Land Use(s) Gilsonite Mining
4. What vegetation exists on the land proposed to be affected Desert shrub
type vegetation (See Exhibit B of attached mine plan)
(a) Types and Estimated Percent cover or density: Sparse coverage
approximately 20%, no vegetation in immediate area of initial mine
shaft.
5. What is the pH range of soil before mining? 7.96-8.74 pH
Name of Person or Agency and method of determining pH Ute Indian Labs
6. Site elevation above sea level 5,260
7. In case of coal, oil shale, and bituminous sandstone:
Principal seam(s) and thickness(es) N/A
8. Estimated duration of mining operations Three years
9. Has overburden, waste or rejected materials been classified as acid or
alkali producing? () Yes (X) No
Does the above material being moved have any other characteristics
affecting revegetation? Unknown
10. Will any underground workings or aquifers be encountered? () Yes () No
Describe Unknown
Is there an active discharge of water from abandoned deep mines on or
crossing the land affected? () Yes (X) No If yes, describe
the quality of water being discharged. _____

11. Describe specifically a detailed procedure for:
- The mining sequence
 - The procedure for constructing and maintaining access roads, to include a typical cross-section and a profile of the proposed road grades.
 - The procedure for site preparation including removing trees and brush.
 - The method for removing and stockpiling topsoil or disturbed materials.
 - The method for the placement or containment of all disturbed materials, to include the method for handling of all acid or alkali-producing and toxic materials.
 - A procedure for final stabilization of disturbed materials.

GRADING AND REGRADING

Specifically describe:

- Typical cross-section of regrading.
- The method of spreading topsoil or upper horizon material on the regraded area and indicate the approximate thickness of the final surfacing material.
- What type of soil treatment will be utilized.
- The method of drainage control for the final regraded area.
- Maximum grading slope.

TESTING

1. Describe method for testing stability of reclamation fill material.

Area will be machine compacted.

Describe method for the testing of soil that is intended to support vegetation

Soil will be tested at Ute Indian Soil Labs

2. Describe any soil treatment employed as an aid to revegetation _____

Whatever is recommended by Soil Test Labs.

3. Describe surface preparation of areas intended to support vegetation:

Area will be regraded and mulched. Seed bed preparation

will follow recommendations of the Ute Indian Soil Labs

Testing Service

REVEGETATION

1. Revegetation to be completed by:

- (X) Operator
() Soil Conservation District
() Private Contractor
() Other (specify) _____

- () Hydroseeding
() Aerial Seeding
() Conventional or Rangeland Drill
() Broadcast and Drag
() Other _____

2. Will Mulch be used? ☒ Yes ☐ No

Type: Unknown Rate/Acre _____ lbs.

Will follow Soil Test Labs recommendations

3. Revegetation Plan and Schedule -

Species	Rate/ Acre	Planting Location	Facing N-S-E-W	Season to be replanted

4. Will affected area be subject to livestock or wildlife grazing?

☐ Yes ☒ No Will vegetation protection be needed? No,

Native type vegetation capable of unassisted survival in the
area will be used.

5. Will irrigation be used: ☐ Yes ☒ No Type _____

6. Describe maintenance procedures for revegetation if needed, until surety release is granted.

None

STATE OF UTAH

COUNTY OF UINTAH

I, Norman R. Haslem, having been duly sworn
depote and attest that all of the representations contained in the foregoing
application are true to the best of my knowledge; that I am authorized to
complete and file this application on behalf of the Applicant and this
application has been executed as required by law.

Signed: Norman R. Haslem

Taken, subscribed and sworn to before me the undersigned authority
in my said county, this 30th day of January, 1985.

Notary Public: John Smith

My Commission Expires: Oct 22, 1988

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides as
follows:

"Information relating to the location, size, or nature
of the deposit and marked confidential by the operator,
shall be protected as confidential information by the
Board and the Division and not be a matter of public
record in the absence of a written release from the
operator, or until the mining operation has been
terminated as provided in subsection (2) of section
40-8-21."

Is confidential information contained herein?

YES _____ (Initial)

NO _____ (Initial)

Sections desired to be maintained as confidential information -

Mine: _____
Company: _____

File No: _____
Representative: _____

Address: _____

Division of Oil, gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: Commitment to Rule M-10

Gentlemen:

I hereby commit the applicant to comply with Rule M-10, "Reclamation standards" in its entirety, as adopted by the Board of Oil, Gas, and Mining on March 22, 1978.

The applicant will achieve the reclamation standards for the following categories as outlined from Rule M-10 on all areas of land affected by this mine, unless a variance is granted in writing by the Division.

<u>Rule</u>	<u>Category of Commitment</u>
M-10(1)	Land Use
M-10(2)	Public Safety and Welfare
M-10(3) N/A	Impoundments
M-10(4)	Slopes
M-10(5) N/A	Highwalls
M-10(6) N/A	Toxic Materials
M-10(7)	Roads and Pads
M-10(8)	Drainages
M-10(9)	Structures and Equipment
M-10(10)	Shafts and Portals
M-10(11)	Sediment Control
M-10(12)	Revegetation
M-10(13) N/A	Dams
M-10(14)	Soils

I believe a variance is justified on a site-specific basis for the following subsections of Rule M-10 for reclamation on this mine and have enclosed as an attachment to this letter a narrative statement setting forth a description of the extent of the variance request and factual reasons for said variance request.

Rule

Category of Variance Request
(Narrative Attached)

STATE OF UTAH

COUNTY OF UINTAH

I, Norman R. Haslem, having been duly sworn depose and attest that all of the representations contained in the foregoing application are true to the best of my knowledge; that I am authorized to complete and file this application on behalf of the Applicant and this application has been executed as required by law.

Signed: Norman R. Haslem

Taken, subscribed and sworn to before me the undersigned authority in my said county, this 30th day of January, 1985.

Notary Public:

Robert Smith

My Commission Expires: Oct 22, 1988

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 WEST NORTH TEMPLE
SALT LAKE CITY, UTAH 84116

DECLARATION OF EXEMPTION

(See Mined Land Reclamation Act 40-8-4(6))

As provided for in Section 40-8-4 UCA 1953, I hereby declare an exemption from the "Utah Mined Land Reclamation Act", in that less than 500 tons of material is being mined or less than two (2) acres of land is being excavated or used as a disposal site during a period of twelve (12) consecutive months, from the following designated claims, leases, or fee acreage.

NAME OF CLAIM, LEASE, OR FEE ACREAGE	$\frac{1}{4}$, $\frac{1}{2}$ SECTION ¹⁶	LOCATION		COUNTY
		TOWNSHIP	RANGE	
1. 51A - Independent I-5 Mine	SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$	9S	24E	Uintah

Commodity: Gilsonite

Date: January 31, 1985

Signature: Norman R. Hansen

OPERATOR: Ziegler Chemical and Mineral Corporation

ADDRESS: Star Route, Little Bonanza, Vernal, Utah 84078

TELEPHONE: (801) 789-3593

*This form needs to be filed one time only. In the event more than the minimum size requirements are mined, a Notice of Intention to Commence Mining Operations (MR Form 1) and a Mining and Reclamation Plan (MR Form 2) will need to be filed with this office.

Map and Table taken from: Utah Department of
Natural Resources, Division of Wildlife Resources
Publication number - 74-2 "Wildlife Resources of
the Utah Oil Shale Area"

EXHIBIT B

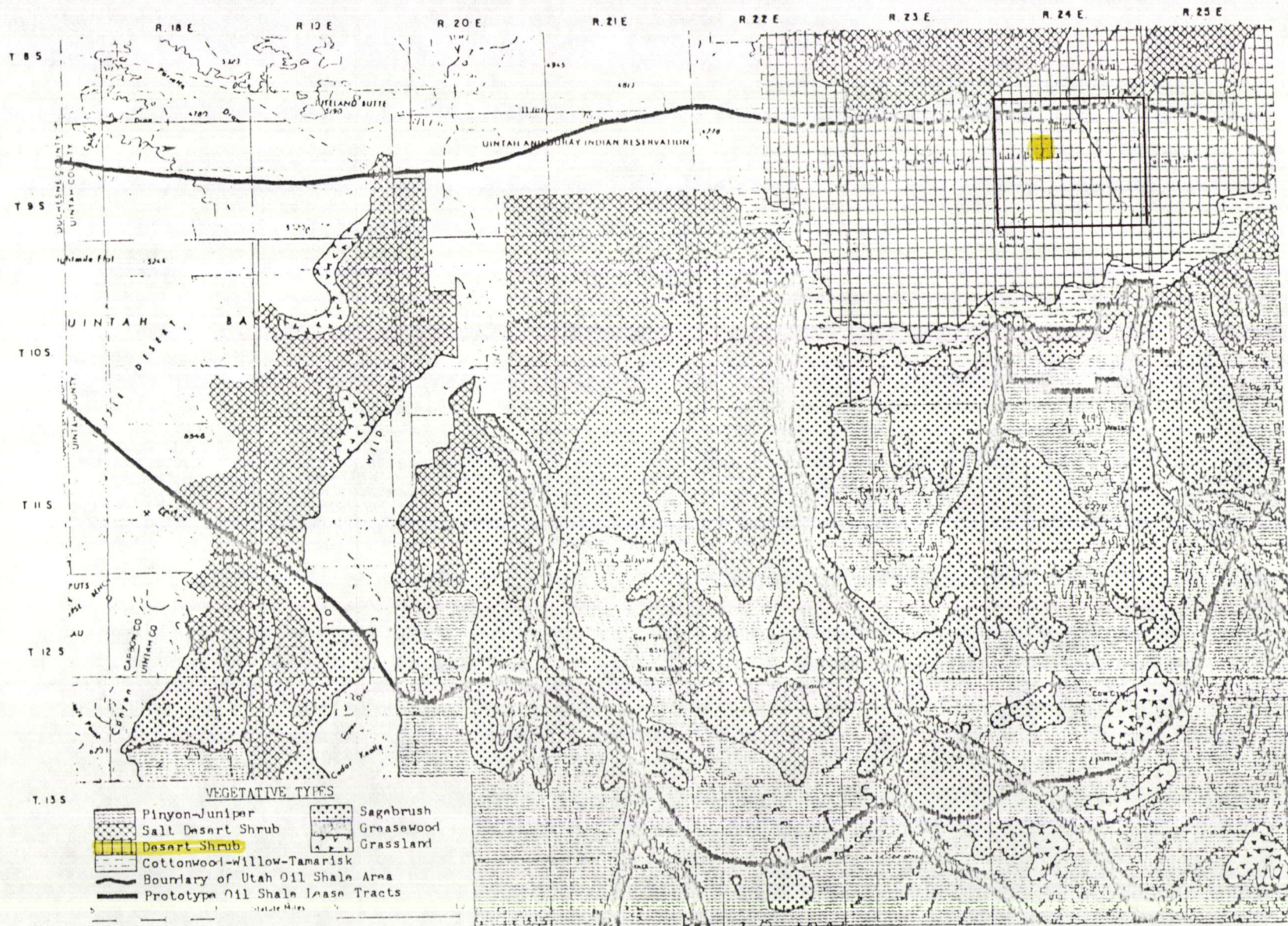
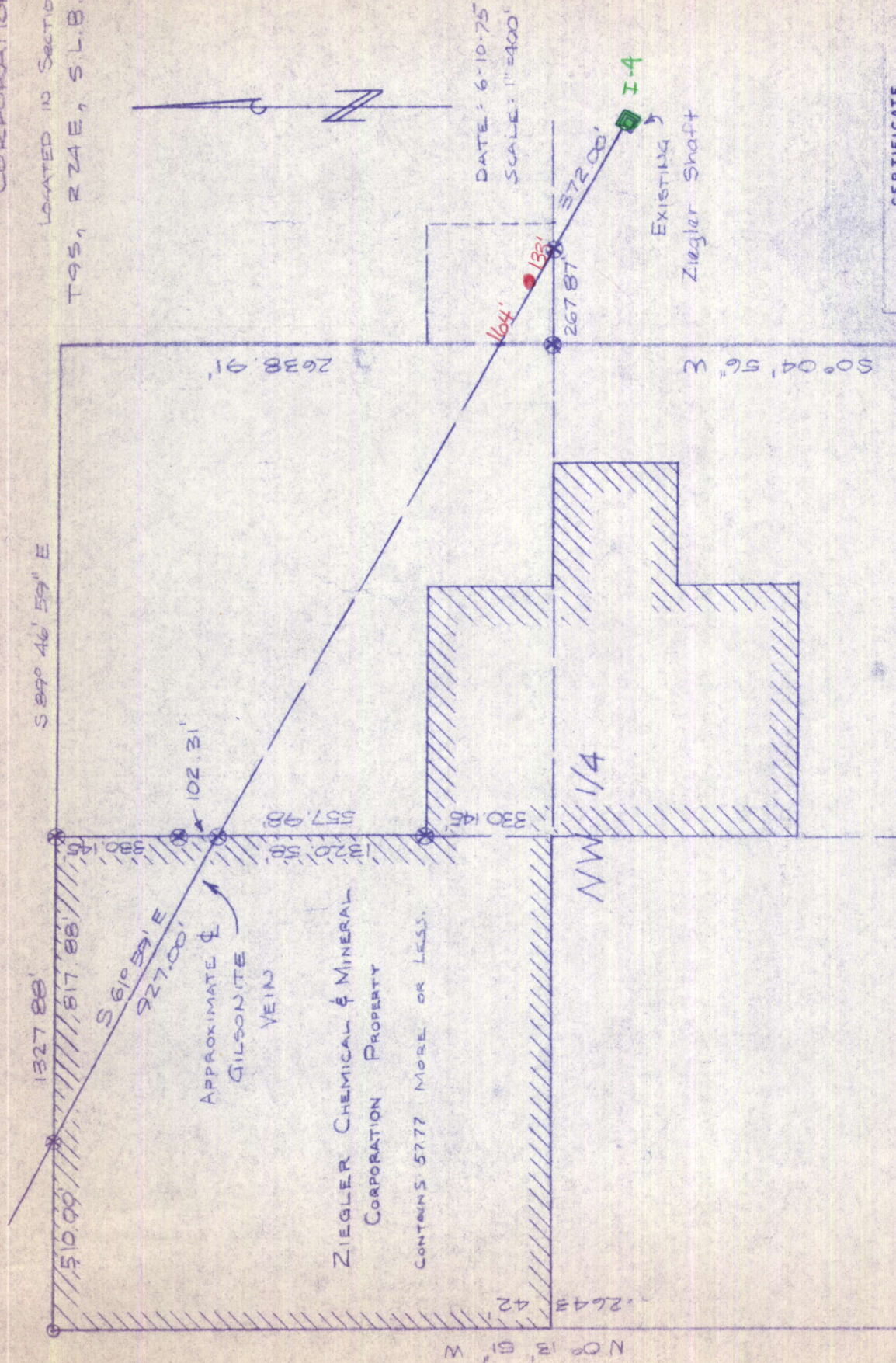


Figure 5. Location of vegetative cover types on the Utah Oil Shale Area

T9S, R24E, S1B&M.

ZIEGLER CHEMICAL & MINERAL CORPORATION

LOCATED IN SECTION 16
T9S, R24E, S1B&M.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Deane Stewart

REGISTERED LAND SURVEYOR
REGISTRATION NO. 3154
STATE OF UTAH

CENTER
SECTION
16

■ = ESCAPE WAY
● = ML851A I-5 MINE

⊗ = CORNERS WITH FENCE POSTS & REBAR
○ = CORNERS WITH FENCE POSTS